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Further Experimental Investigations of the Richtmyer-Meshkov Instability[1] L.M. LOGORY, P.L. MILLER, T.A. PEYSER, P.E. STRY, Lawrence Livermore National Laboratory — We report on further experimental investigations of the Richtmyer-Meshkov instability from an initially nonlinear perturbation, conducted on the Nova laser. The experiments use a Nova hohlraum as a driver source for a strong shock in a miniature shock tube attached to the hohlraum. The shock tube contains brominated plastic and low-density carbon foam as the two working fluids, with a micro-machined sawtooth interface between them serving as the perturbation. The shock, upon crossing the interface, instigates the Richtmyer-Meshkov instability from the perturbation. The resulting growth of the mixing layer is diagnosed radiographically. We have previously reported upon a results from a single wavelength and amplitude of perturbation [2]. A study of the effect of variations in amplitude and wavelength on the nonlinear growth of the instability will be discussed.

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[2]T. A. Peyser *et al., Phys. Rev. Lett.* **75, 2332 (1996).**

[X] Prefer Oral Session
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